September 2016

Veterinary Services Staff

Branch Supervisor/Wildlife Veterinarian: Dr. Mary Wood

Laboratory Supervisor: Hank Edwards

Senior Lab Scientist: Hally Killion

Senior Lab Scientist: Jessica Jennings-Gaines

Brucellosis Lab Assistant: Kylie Sinclair

Wildlife Disease Specialist: Terry Creekmore

TWRC Manager: Matt Huizenga

Wildlife Biologist: Cole Hansen

Biologist: Sam Lockwood

Thorne/Williams Wildlife Research Center

Facility Fencing and Flood Recovery

August was a busy month for us here at the Thorne-Williams Wildlife Research Center as we continue to recover from heavy floods this past spring. This month we finished building a new fence line on the west end of the facility, moving it away from the creek to prevent future flooding problems. A big thanks to all of the Laramie Region personal who came out and helped with this project – we couldn't have gotten it done without the extra help!

New fence installed away from the creek.

Weed Control

Cheat grass and thistle have been a constant issue at our facility. With the help of habitat biologist, Ryan Amundson, we were able to get a helicopter out to spray for both weeds around our facility and in Sybille canyon. Hopefully next year our pastures will be in better shape.

Helicopter spraying for weeds to combat cheat grass and thistle in and around the research facility.

Brucellosis Surveillance

The staff of the Wildlife Health Laboratory continues assembly of blood kits for brucellosis surveillance in hunter-killed elk. As of the end of August, all 10,000 blood kits had been assembled, labeled and ready for mailing. If you are a cow elk hunter in the Bighorns or in northeastern corner of the state, chances are you will be receiving a blood kit in the mail. Please remember that this is an important program and we are always looking for blood samples from elk to document where this disease occurs and where it doesn't – so please keep us in mind whenever you have your hands on elk and can get us a blood sample!

Blood collecting kit for brucellosis surveillance in hunter-killed elk.

CWD Surveillance

The laboratory has also been abuzz with everyone busy preparing for chronic wasting disease surveillance. Sampling kits have been built and distributed to the regional offices along with any requested sampling supplies.

CWD sampling kit for surveillance .

Other Happenings

Jessica and Kylie took a day off from building CWD and brucellosis kits to assist Melissa and Patrick of the Migratory Game Bird section banding ducks. Swim-in traps were set at Springer and Table Mountain, and Kylie and Jessica was able to assist with both the morning and evening banding efforts.

Kylie assisting the Migratory Game Bird section banding a blue-winged teal.

Species	Date Received	County	Diagnosis
Mule Deer	6/17/2016	Lincoln	Peritonitis
Mule Deer	6/17/2016	Uinta	Adenovirus
Rabbit	6/17/2016	Weston	Tularemia
Mule Deer	6/30/2016	Lincoln	Bovine Viral Diarrhea Virus
Crow	7/8/2016	Albany	Trauma/hepatitis
Mule Deer	8/2/2016	Sweetwater	Adenovirus
Mountain lion	8/10/2016	Albany	Health survey/gunshot
Raccoon	8/12/2016	Teton	Trauma
Pine siskin (2)	8/12/2016	Teton	Undetermined (Severe Autolysis)
Sage grouse	8/12/2016	Teton	Acute Trauma
Black cormorant	8/12/2016	Sheridan	Pulmonary Hemorrhage
Crow	8/23/2016	Natrona	West Nile Virus
Owl	8/24/2016	OS/ID	Unknown (Severe Autolysis)

This month we also received 11 mule deer, an antelope, an American kestrel, a Swainson's hawk, a cotton-tailed rabbit, and an arctic fox. These cases are still pending results.

Disease of the Month

West Nile Virus

(WNV) positive birds are becoming more common this time of year. Last month we reported a Northern Flicker with WNV from Laramie and in August we documented a WNV positive crow from the Casper. Remember to protect yourself by using insect repellent whenever you are outdoors.

West Nile virus (WNV) is mosquito-borne virus of birds that also causes illness and death in many species, including horses and humans. The primary hosts of the WNV are wild birds of almost all families, but other species become infected after being bitten by an infected mosquito. Transmission is seasonal with the majority of cases in Wyoming occurring in the late summer. Temperature has a major influence on WNV transmission and, consequently, infection rates are higher during years when the late summer temperatures are above average. Elevation also influences temperature, especially night-time temperatures when *Culex tarsalis* feeds. Transmission rates in Wyoming are typically higher at elevations below 6,000 feet. WNV is only spread by insect vectors; it is not transmitted person-to-person or bird-to-person. In Wyoming, the primary vector for WNV is the nocturnal mosquito *Culex tarsalis*.

West Nile Virus infection can cause significant mortality in avian species such as crows, jays, magpies, hawks, owls, and eagles. Sage grouse are particularly susceptible to WNV infection and significant mortality events have occurred in the Powder River Basin. This disease does not typically cause morbidity or mortality in big game animals in Wyoming.

Precautions should be taken to avoid being bitten by mosquitoes particularly during the peak transmission periods. Most humans infected with the virus develop no symptoms or mild infections, but WNV can sometimes cause serious, life-threatening disease. Mild symptoms include fever, headache, and body aches that usually go away on their own, but some people develop a high fever, convulsions, and even paralysis. Death rates associated with severe WNV infection range from 3-15% and are highest among the elderly. There is no treatment for avian species infected with WNV, but vaccines are available for use in horses; there is no specific human treatment or vaccine. The most effective way to prevent WNV is to wear mosquito repellent whenever outside in mid to late summer.

Raven with neurological signs from infection with West Nile Virus in 2004.